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1752 AEPN

PTO/SB/21 (08-03)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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|   |                      |                        |                 |
|---|----------------------|------------------------|-----------------|
| <b>TRANSMITTAL FORM</b><br><br>(to be used for all correspondence after initial filing) | Application Number   | 10/079,289             |                 |
|   | Filing Date          | February 19, 2002      |                 |
|   | First Named Inventor | Ratnam SOORIYAKUMARAN  |                 |
|   | Art Unit             | 1752                   |                 |
|   | Examiner Name        | Yvette C. Thornton     |                 |
| Mail Stop   | PETITION             | Attorney Docket Number | YOR920000693US2 |

| ENCLOSURES (Check all that apply)  |  |   |
|--|--|---|
| <input checked="" type="checkbox"/> No fee due<br><input type="checkbox"/> Fee Transmittal<br><input type="checkbox"/> Fee(s) due<br><input type="checkbox"/> Fee Transmittal<br><input type="checkbox"/> Check for \$*<br><input checked="" type="checkbox"/> Charge any underpayment or credit any overpayment to Deposit Account No. 18-0580<br><input checked="" type="checkbox"/> Return postcard<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input type="checkbox"/> Information Disclosure Statement & Form(s) PTO-1449<br><input type="checkbox"/> Copy(ies) of cited reference(s)<br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Response to Missing Parts / Incomplete Application<br><input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input checked="" type="checkbox"/> Petition to Withdraw Holding of Abandonment<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s): | <input type="checkbox"/> After Allowance Communication to a Technology Center (TC)<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <u>Statement in Support of Petition</u> |
| Remarks:<br><b>The Commissioner is hereby authorized to charge any additional or underpayment of fee(s) to Deposit Account No. 18-0580.</b>  |  |   |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT |  |           |                 |
|--|--|-----------|-----------------|
| Firm or Individual Name (print/type)       | Karen Canaan, Reg. No. 42,382<br>Reed & Eberle LLP | Telephone | (650) 330-0900  |
| Signature                                  |  | Date      | August 16, 2004 |

| CERTIFICATE OF MAILING  |               |      |                 |
|---|---------------|------|-----------------|
| hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below. |               |      |                 |
| Name (print/type)   | Mary O'Malley | Date | August 16, 2004 |
| Signature   |               | Date | August 16, 2004 |



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Ratnam SOORIYAKUMARAN et al.

Confirmation No.: 7983

Serial No.: 10/079,289

Group Art Unit: 1752

Filing Date: February 19, 2002

Examiner: Yvette C. THORNTON

Title: FLUORINATED SILSESQUIOXANE POLYMERS AND USE THEREOF IN  
LITHOGRAPHIC PHOTORESIST COMPOSITIONS

**PETITION TO WITHDRAW THE HOLDING OF ABANDONMENT**  
**UNDER 37 CFR § 1.181**

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants, by way of this Petition under 37 C.F.R. § 1.181 (the "Petition"), request withdrawal of the holding of abandonment for the above-identified application; this application was improperly held abandoned in the Notice of Abandonment mailed from the Office on June 28, 2004. The facts in support of the Petition are as follows.

**STATEMENT OF FACTS**

On September 23, 2003, a Restriction Requirement was sent from the United States Patent and Trademark Office (the "Office") for the application referenced above.

On October 23, 2003, a Third Preliminary Amendment and Response to Restriction Requirement was filed with the Office via first class mail.

On November 19, 2003, a Notice of Non-Compliant Amendment (the "Notice") was sent from the Office, stating that a complete listing of the claims was not included with the response. Applicants' were given one-month to respond to the Notice. The Notice is attached as Exhibit A.

On December 19, 2003, a Response to Non-Compliant Amendment (the "Response") was filed via first class mail. The Response is attached as Exhibit B.

Attached as Exhibit C is the "Transmittal Letter" submitted with the Response. The certificate of mailing on the Transmittal Letter shows that the Response was mailed prior to the expiration of the shortened statutory period for reply of one month set forth in the Notice, and within three months of the mailing date of the original Restriction Requirement.

Attached as Exhibit D is a statement by Mary O'Malley certifying that the Response was placed in the U.S. Mail on December 19, 2003.

Attached as Exhibit E is the return postcard submitted with the Response, which shows that the Response was received by the Office on December 22, 2003, and returned to Applicants, indicating that the USPTO received the Response.

The foregoing facts and supporting evidence demonstrate that the Response was timely and properly filed pursuant to 37 C.F.R. §1.8.

**RELIEF REQUESTED**

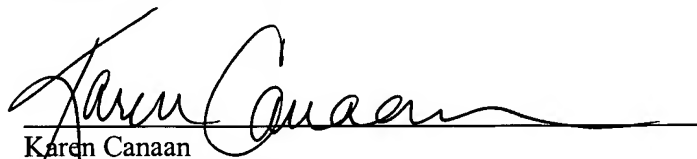
Because applicants mailed the Response prior to the expiration of the shortened statutory period for reply of one month as indicated by the certificate of mailing and return post card, the Response was timely and properly filed pursuant to 37 C.F.R. §1.8. Further, as this Petition is filed within two months of the mailing date of the Notice of Abandonment, applicants respectfully request withdrawal of the holding of abandonment in accordance with MPEP § 711.03(c).

Should the Commissioner have any questions regarding this matter, the undersigned attorney may be reached at (650) 330-0900.

As the Office does not charge a fee for Petitions to Withdraw the Holding of Abandonment, no fee accompanies this Petition. Should the Office determine that a fee is necessary to process this petition, then under such circumstance, the Commissioner is authorized to charge such fee to Deposit Account No. 18-0580.

Respectfully submitted,

By:



Karen Canaan  
Registration No. 42,382

REED & EBERLE LLP  
800 Menlo Avenue, Suite 210  
Menlo Park, California 94025  
(650) 330-0900 Telephone  
(650) 330-0980 Facsimile



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/079,289      | 02/19/2002  | Ratnam Sooriyakumaran | YOR920000693US2     | 7983             |

23980 7590 11/19/2003  
REED & EBERLE LLP  
800 MENLO AVENUE, SUITE 210  
MENLO PARK, CA 94025

RECEIVED

NOV 24 2013

REED & EBERLE LLP

EXAMINER

THORNTON, YVETTE C

ART UNIT

PAPER NUMBER

1752

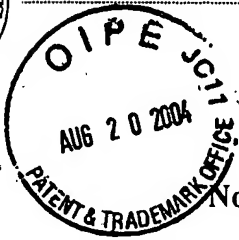
DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

5075-0029.20  
11/24/03 *ma*  
DER DOCKETED  
for Compliance 12/19/03



## UNITED STATES PATENT AND TRADEMARK OFFICE



10/079,289  
COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
P.O. Box 1450  
ALEXANDRIA, VA 22313-1450  
www.uspto.gov

Paper No.

## Notice of Non-Compliant Amendment (37 CFR 1.121)

The amendment document filed on 10/27/03 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121, as amended on June 30, 2003 (see 68 Fed. Reg. 38611, Jun. 30, 2003). In order for the amendment document to be compliant, correction of the following item(s) is required. **Only the corrected section of the non-compliant amendment document must be resubmitted (in its entirety), e.g., the entire "Amendments to the claims" section of applicant's amendment document must be re-submitted.** 37 CFR 1.121(h).

## THE FOLLOWING CHECKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
- ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_
- ☐ 3. Amendments to the drawings: \_\_\_\_\_
- ☒ 4. Amendments to the claims:
- ☒ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all claims (including withdrawn claims)
  - ☒ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified.
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: Claims 1-66 were not listed.

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP Sec. 714 and the USPTO website at <http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/officeflyer.pdf>.

If the non-compliant amendment is a **PRELIMINARY AMENDMENT**, applicant is given ONE MONTH from the mail date of this letter to supply the corrected section which complies with 37 CFR 1.121. Failure to comply with 37 CFR 1.121 will result in non-entry of the preliminary amendment and examination on the merits will commence without consideration of the proposed changes in the preliminary amendment(s). This notice is not an action under 35 U.S.C. 132, and this **ONE MONTH** time limit is not extendable.

If the non-compliant amendment is a reply to a **NON-FINAL OFFICE ACTION** (including a submission for an RCE), and since the amendment appears to be a *bona fide* attempt to be a reply (37 CFR 1.135(c)), applicant is given a **TIME PERIOD** of ONE MONTH from the mailing of this notice within which to re-submit the corrected section which complies with 37 CFR 1.121 in order to avoid abandonment. **EXTENSIONS OF THIS TIME PERIOD ARE AVAILABLE UNDER 37 CFR 1.136(a).**

If the amendment is a reply to a **FINAL REJECTION**, this form may be an attachment to an Advisory Action. The period for response to a final rejection continues to run from the date set in the final rejection, and is not affected by the non-compliant status of the amendment.

Hedra Nelson  
Legal Instruments Examiner (LIE)

(703) 308-2936  
Telephone No.



COPY

PTO/SB/21 (08-03)

Approved for use through 08/30/2003. OMB 0651-0031

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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

|                        |                       |
|------------------------|-----------------------|
| Application Number     | 10/079,289            |
| Filing Date            | February 19, 2002     |
| First Named Inventor   | Ratnam Sooriyakumaran |
| Art Unit               | 1752                  |
| Examiner Name          | Yvette C. Thornton    |
| Attorney Docket Number | YOR920000693US2       |

Mail Stop

**ENCLOSURES (Check all that apply)**

|   |  |  |
|---|--|--|
| <input type="checkbox"/> No fee due<br><input type="checkbox"/> Fee Transmittal<br><input checked="" type="checkbox"/> Fee(s) due<br><input checked="" type="checkbox"/> Fee Transmittal<br><input type="checkbox"/> Check for \$*<br><input checked="" type="checkbox"/> Charge any underpayment or credit any overpayment to Deposit Account No. 18-0580<br><input checked="" type="checkbox"/> Return postcard<br><input checked="" type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input checked="" type="checkbox"/> Information Disclosure Statement & Form(s) PTO-1449<br><input type="checkbox"/> Copy(ies) of cited reference(s)<br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Response to Missing Parts / Incomplete Application<br><input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s): | <input type="checkbox"/> After Allowance Communication to a Technology Center (TC)<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input type="checkbox"/> Other Enclosure(s) (please identify below): |
| <b>Remarks:</b><br>The Commissioner is hereby authorized to charge any additional or underpayment of fee(s) to Deposit Account No. 18-0580.   |  |  |

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

|                                      |  |           |                   |
|--------------------------------------|--|-----------|-------------------|
| Firm or Individual Name (print/type) | Dianne E. Reed, Reg. No. 31,292<br>Reed & Eberle LLP | Telephone | (650) 330-0900    |
| Signature                            |  | Date      | December 19, 2003 |

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

|                   |               |      |                   |
|-------------------|---------------|------|-------------------|
| Name (print/type) | Mary O'Malley | Date | December 19, 2003 |
| Signature         |               |      |                   |

COPY

R&amp;E No. 5075-0029.20

PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(\$) 306.00

## Complete if Known

|                      |                       |
|----------------------|-----------------------|
| Application Number   | 10/079,289            |
| Filing Date          | February 19, 2002     |
| First Named Inventor | Ratnam Sooriyakumaran |
| Examiner Name        | Yvette C. Thornton    |
| Art Unit             | 1752                  |
| Attorney Docket No.  | ARC920000693US2       |

## METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☒ Deposit Account:Deposit Account Number  
Deposit Account Name

09-0441

International Business Machines Corporation

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments☒ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

| Large Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description        | Fee Paid |
|----------------------------|----------------------------|------------------------|----------|
| 1001 770                   | 2001 385                   | Utility filing fee     |          |
| 1002 340                   | 2002 170                   | Design filing fee      |          |
| 1003 530                   | 2003 265                   | Plant filing fee       |          |
| 1004 770                   | 2004 385                   | Reissue filing fee     |          |
| 1005 160                   | 2005 80                    | Provisional filing fee |          |

SUBTOTAL (1) (\$) 0

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| Total Claims       | Extra Claims | Fee from below | Fee Paid |
|--------------------|--------------|----------------|----------|
| 84                 | -20** = 17   | 18             | \$306    |
| Independent Claims | 2            | -3** = 0       | 0        |
| Multiple Dependent |              |                | 0        |

| Large Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description  |
|----------------------------|----------------------------|--|
| 1202 18                    | 2202 9                     | Claims in excess of 20                                     |
| 1201 86                    | 2201 43                    | Independent claims in excess of 3                          |
| 1203 290                   | 2203 145                   | Multiple dependent claim, if not paid                      |
| 1204 86                    | 2204 43                    | ** Reissue independent claims over original patent         |
| 1205 18                    | 2205 9                     | ** Reissue claims in excess of 20 and over original patent |

SUBTOTAL (2) (\$) 306.00

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

## 3. ADDITIONAL FEES

Large Entity Small Entity

| Fee Code    | Fee (\$)    | Fee Code | Fee (\$) | Fee Description  | Fee Paid |
|-------------|-------------|----------|----------|--|----------|
| 1051 130    | 2051 65     |          |          | Surcharge - late filing fee or oath  |          |
| 1052 50     | 2052 25     |          |          | Surcharge - late provisional filing fee or cover sheet                     |          |
| 1053 130    | 1053 130    |          |          | Non-English specification  |          |
| 1812 2,520  | 1812 2,520  |          |          | For filing a request for <i>ex parte</i> reexamination                     |          |
| 1804 920*   | 1804 920*   |          |          | Requesting publication of SIR prior to Examiner action                     |          |
| 1805 1,840* | 1805 1,840* |          |          | Requesting publication of SIR after Examiner action                        |          |
| 1251 110    | 2251 55     |          |          | Extension for reply within first month                                     |          |
| 1252 420    | 2252 210    |          |          | Extension for reply within second month                                    |          |
| 1253 950    | 2253 475    |          |          | Extension for reply within third month                                     |          |
| 1254 1,480  | 2254 740    |          |          | Extension for reply within fourth month                                    |          |
| 1255 2,010  | 2255 1,005  |          |          | Extension for reply within fifth month                                     |          |
| 1401 330    | 2401 165    |          |          | Notice of Appeal   |          |
| 1402 330    | 2402 165    |          |          | Filing a brief in support of an appeal                                     |          |
| 1403 290    | 2403 145    |          |          | Request for oral hearing   |          |
| 1451 1,510  | 1451 1,510  |          |          | Petition to institute a public use proceeding                              |          |
| 1452 110    | 2452 55     |          |          | Petition to revive - unavoidable   |          |
| 1453 1,330  | 2453 665    |          |          | Petition to revive - unintentional   |          |
| 1501 1,330  | 2501 665    |          |          | Utility issue fee (or reissue)   |          |
| 1502 480    | 2502 240    |          |          | Design issue fee   |          |
| 1503 640    | 2503 320    |          |          | Plant issue fee  |          |
| 1460 130    | 1460 130    |          |          | Petitions to the Commissioner  |          |
| 1807 50     | 1807 50     |          |          | Processing fee under 37 CFR 1.17(q)  |          |
| 1806 180    | 1806 180    |          |          | Submission of Information Disclosure Stmt                                  |          |
| 8021 40     | 8021 40     |          |          | Recording each patent assignment per property (times number of properties) |          |
| 1809 770    | 2809 385    |          |          | Filing a submission after final rejection (37 CFR 1.129(a))                |          |
| 1810 770    | 2810 385    |          |          | For each additional invention to be examined (37 CFR 1.129(b))             |          |
| 1801 770    | 2801 385    |          |          | Request for Continued Examination (RCE)                                    |          |
| 1802 900    | 1802 900    |          |          | Request for expedited examination of a design application                  |          |

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 0

## SUBMITTED BY

(Complete if applicable)

Name (Print/Type)

Dianne E. Reed

Registration No. (Attorney/Agent)

31,292

Telephone

Signature

Dianne E. Reed

Date

December 19, 2003

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:  
Ratnam SOORIYAKUMARAN et al.

Confirmation No.: 7983

Serial No.: 10/079,289

Group Art Unit: 1752

Filing Date: February 19, 2002

Examiner: Yvette C. THORNTON

Title: FLUORINATED SILSESQUIOXANE POLYMERS  
AND USE THEREOF IN LITHOGRAPHIC  
PHOTORESIST COMPOSITIONS (as amended  
herein)

**THIRD PRELIMINARY AMENDMENT AND**  
**RESPONSE TO REQUIREMENT FOR RESTRICTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is in response to the Notice of Non-Compliant Amendment mailed November 19, 2003 concerning the patent application referenced above. This response includes a complete listing of the claims as required under 37 CFR 1.121, but otherwise, is a duplicate of the response mailed October 23, 2003. A copy of the Supplemental Information Disclosure Statement is also being resubmitted herewith.

**An Amendment to the Title** is set forth on page 2 of this document.

**Amendments to the Claims** are reflected in the listing of the claims which begins on page 3 of this document.

**Remarks** begin on page 14 of this document.

**BEST AVAILABLE COPY**





**AMENDMENT TO THE TITLE**

On page 1 of the application, at lines 1-2, on page 71 of the application, at lines 1-2, and wherever the title appears in the application documents, please change the title to read

**--FLUORINATED SILSESQUIOXANE POLYMERS AND  
USE THEREOF IN LITHOGRAPHIC PHOTORESIST COMPOSITIONS--.**

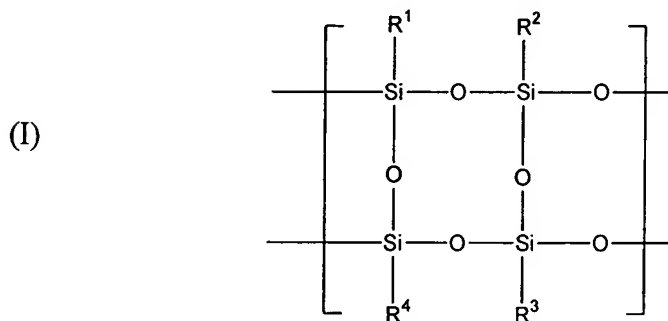
**BEST AVAILABLE COPY**

The following listing of the claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF THE CLAIMS**

Claims 1-66 (Canceled)

67. (Currently amended) A fluorinated silsesquioxane polymer comprised of monomer units having the structure (I)



wherein:

$\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are independently selected from the group consisting of substituents having a terminal  $\text{---CR}^7\text{R}^8\text{R}^9$  group the structure of formula  $\text{---(Q)}_n\text{---CR}^7\text{R}^8\text{R}^9$ ;

$n$  is zero or 1;

$Q$  is selected from the group consisting of arylene, substituted arylene, alkarylene, substituted alkarylene, and  $\text{C}_1\text{---C}_4$  alkylene optionally substituted with at least one nonhydrogen substituent selected from alkyl and fluoroalkyl;

$\text{R}^7$  is hydrogen, alkyl, or fluoroalkyl;

$\text{R}^8$  is fluoroalkyl; and

$\text{R}^9$  is OH, COOH or an acid-cleavable moiety.

68. (Canceled)

69. (Canceled)

70. (Canceled)

71. (Currently amended) The polymer of claim ~~69~~ 67, wherein n is 1 and Q is selected from the group consisting of arylene, fluorinated arylene, ~~cycloalkylene, fluorinated cycloalkylene,~~ and C<sub>1</sub>-C<sub>4</sub> alkylene optionally substituted with 1-8 nonhydrogen substituents selected from alkyl and fluoroalkyl.

72. (Canceled)

73. (Currently amended) The polymer of claim ~~72~~ 71, wherein Q is arylene or fluorinated arylene.

74. (Canceled)

75. (Previously presented) The polymer of claim 73, wherein Q is arylene.

76. (Previously presented) The polymer of claim 73, wherein Q is fluorinated arylene.

77. (Canceled)

78. (Canceled)

79. (Previously presented) The polymer of claim 71, wherein Q is C<sub>1</sub>-C<sub>4</sub> alkylene optionally substituted with 1-8 nonhydrogen substituents selected from alkyl and fluoroalkyl.

80. (Previously presented) The polymer of claim 79, wherein Q is C<sub>1</sub>-C<sub>4</sub> alkylene optionally substituted with 1-8 nonhydrogen substituents selected from C<sub>1</sub>-C<sub>6</sub> alkyl and C<sub>1</sub>-C<sub>6</sub> fluoroalkyl.

81. (Previously presented) The polymer of claim 79, wherein Q is C<sub>1</sub>-C<sub>4</sub> alkylene optionally substituted with 1-8 nonhydrogen substituents selected from C<sub>1</sub>-C<sub>6</sub> alkyl, trifluoromethyl, and trifluoromethyl-substituted C<sub>1</sub>-C<sub>6</sub> alkyl.

82. (Canceled)

83. (Canceled)

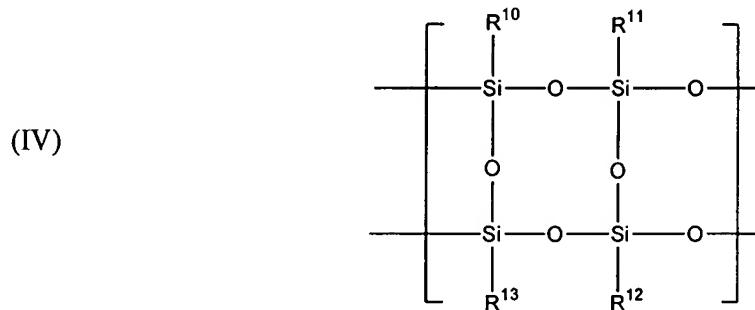
84. (Previously presented) The polymer of claim 67, wherein R<sup>8</sup> is C<sub>1</sub>-C<sub>6</sub> fluoroalkyl.

85. (Currently amended) The polymer of claim ~~83~~ 84, wherein  $R^8$  is trifluoromethyl-substituted  $C_1$ - $C_6$  alkyl.
86. (Previously presented) The polymer of claim 67, wherein  $R^9$  is OH.
87. (Previously presented) The polymer of claim 67, wherein  $R^9$  is COOH.
88. (Previously presented) The polymer of claim 67, wherein  $R^9$  is an acid-cleavable moiety.
89. (Previously presented) The polymer of claim 88, wherein the acid-cleavable moiety is an acid-cleavable ester, ether or carbonate.
90. (Previously presented) The polymer of claim 89, wherein  $R^9$  is an acid-cleavable ester.
91. (Currently amended) The polymer of claim 90, wherein  $R^9$  has the formula  $-(L)_v-(CO)-OR^{14}$  wherein v is zero or 1, L is a linking group, and  $R^{14}$  is selected from the group consisting of acyclic tertiary alkyl moieties, ~~cyclic or alicyclic~~ substituents with a tertiary attachment point, and 2-trialkylsilylethyl moieties.
92. (Currently amended) The polymer of claim 91, wherein v is zero and  $R^{14}$  is acyclic tertiary alkyl.
93. (Previously presented) The polymer of claim 92, wherein  $R^{14}$  is *t*-butyl.
94. (Currently amended) The polymer of claim 91, wherein v is zero and  $R^{14}$  is a ~~cyclic or alicyclic~~ substituent with a tertiary attachment point.
95. (Currently amended) The polymer of claim 94, wherein  $R^{14}$  is selected from the group consisting of adamantyl, norbornyl, isobornyl, 2-methyl-2-adamantyl, 2-methyl-2-isobornyl, 2-butyl-2-adamantyl, 2-propyl-2-isobornyl, 2-methyl-2-tetracyclododecenyl, 2-methyl-2-dihydrodicyclopentadienyl-cyclohexyl, 1-methylcyclopentyl, and 1-methylcyclohexyl, ~~2-trimethylsilylethyl, and 2-triethylsilylethyl.~~
96. (Previously presented) The polymer of claim 91, wherein v is zero and  $R^{14}$  is 2-trialkylsilylethyl.



97. (Previously presented) The polymer of claim 96, wherein  $R^{14}$  is 2-trimethylsilylethyl.

98. (Previously presented) The polymer of claim 67, further comprising additional monomer units having the structure of formula (IV)



wherein  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  are independently hydrogen, alkyl, fluoroalkyl, fluorocarbonol or an acid-cleavable moiety, with the proviso that at least one of  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  is an acid-cleavable moiety.

99. (Currently amended) The polymer of claim 98, wherein ~~at least one of  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  is~~ are independently hydrogen, alkyl, or the acid-cleavable moiety, and the acid-cleavable moiety is selected from the group consisting of acid-cleavable esters, ethers, and carbonates.

100. (Previously presented) The polymer of claim 99, wherein at least one of  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  is an acid-cleavable ester.

101. (Previously presented) A lithographic photoresist composition comprising the fluorinated silsesquioxane polymer of claim 67 and a radiation-sensitive acid generator.

102. (Previously presented) A lithographic photoresist composition comprising the fluorinated silsesquioxane polymer of claim 98 and a radiation-sensitive acid generator.

103. (Previously presented) The lithographic photoresist composition of claim 101, wherein the photoresist composition is a positive resist and further comprises a photoacid-cleavable dissolution inhibitor.

104. (Previously presented) The lithographic photoresist composition of claim 102, wherein the photoresist composition is a positive resist and further comprises a photoacid-cleavable dissolution inhibitor.

105. (Previously presented) The lithographic photoresist composition of claim 101, wherein the photoresist composition is a negative resist and further comprises a crosslinking agent.

106. (Previously presented) The lithographic photoresist composition of claim 102, wherein the photoresist composition is a negative resist and further comprises a crosslinking agent.

107. (Previously presented) The lithographic photoresist composition of claim 105, wherein the crosslinking agent is a glycoluril compound.

108. (Previously presented) The lithographic photoresist composition of claim 107, wherein the glycoluril compound is selected from the group consisting of tetramethoxymethyl glycoluril, methylpropyltetramethoxymethyl glycoluril, methylphenyltetramethoxymethyl glycoluril, and mixtures thereof.

109. (Previously presented) The lithographic photoresist composition of claim 106, wherein the crosslinking agent is a glycoluril compound.

110. (Previously presented) The lithographic photoresist composition of claim 109, wherein the glycoluril compound is selected from the group consisting of tetramethoxymethyl glycoluril, methylpropyltetramethoxymethyl glycoluril, methylphenyltetramethoxymethyl glycoluril, and mixtures thereof.

111. (Withdrawn) A process for generating a resist image on a substrate, comprising the steps of:

- (a) coating a substrate with a film of the photoresist composition of claim 101;
- (b) exposing the film selectively to a predetermined pattern of deep ultraviolet radiation so as to form a latent, patterned image in the film; and
- (c) developing the latent image with a developer.

112. (Withdrawn) The process of claim 111, wherein the deep ultraviolet radiation has a wavelength of less than 250 nm.

113. (Withdrawn) The process of claim 112, wherein the deep ultraviolet radiation has a wavelength of 157 nm.

114. (Withdrawn) The process of claim 111, wherein the substrate is a bilayer substrate comprising a base layer covered by an underlayer and the photoresist composition covers the underlayer.

115. (Withdrawn) A process for generating a resist image on a substrate, comprising the steps of:  
(a) coating a substrate with a film of the photoresist composition of claim 102;  
(b) exposing the film selectively to a predetermined pattern of deep ultraviolet radiation so as to form a latent, patterned image in the film; and  
(c) developing the latent image with a developer.

116. (Withdrawn) The process of claim 115, wherein the deep ultraviolet radiation has a wavelength of less than 250 nm.

117. (Withdrawn) The process of claim 116, wherein the deep ultraviolet radiation has a wavelength of 157 nm.

118. (Withdrawn) The process of claim 115, wherein the substrate is a bilayer substrate comprising a base layer covered by an underlayer and the photoresist composition covers the underlayer.

119. (Withdrawn) A method of forming a patterned material structure on a substrate, comprising:  
(a) providing a substrate comprised of a material selected from the group consisting of semiconductors, ceramics and metals;  
(b) applying a layer of the photoresist composition of claim 103 to the substrate;  
(c) patternwise exposing the substrate to radiation whereby acid is generated by the radiation-sensitive acid generator in exposed regions of the photoresist layer;  
(d) contacting the substrate with an aqueous alkaline developer solution, whereby the exposed regions of the photoresist layer are selectively dissolved by the developer solution to reveal a resist structure pattern; and  
(e) transferring the resist structure pattern to the substrate by etching into the substrate through spaces in the resist structure pattern.

120. (Withdrawn) The process of claim 119, wherein the radiation is deep ultraviolet radiation.

121. (Withdrawn) A method of forming a patterned material structure on a substrate, comprising:

- (a) providing a substrate comprised of a material selected from the group consisting of semiconductors, ceramics and metals;
- (b) applying a layer of the photoresist composition of claim 104 to the substrate;
- (c) patternwise exposing the substrate to radiation whereby acid is generated by the radiation-sensitive acid generator in exposed regions of the photoresist layer;
- (d) contacting the substrate with an aqueous alkaline developer solution, whereby the exposed regions of the photoresist layer are selectively dissolved by the developer solution to reveal a resist structure pattern; and
- (e) transferring the resist structure pattern to the substrate by etching into the substrate through spaces in the resist structure pattern.

122. (Withdrawn) The process of claim 119, wherein the radiation is deep ultraviolet radiation.

123. (Withdrawn) A method of forming a patterned material structure on a substrate, comprising:

- (a) providing a substrate comprised of a material selected from the group consisting of semiconductors, ceramics and metals;
- (b) applying a layer of the photoresist composition of claim 105 to the substrate
- (c) patternwise exposing the substrate to radiation whereby acid is generated by the radiation-sensitive acid generator in exposed regions of the photoresist layer thereby inducing crosslinking;
- (d) contacting the substrate with an aqueous alkaline developer solution, whereby the unexposed regions of the photoresist layer are selectively dissolved by the developer solution to reveal a negative resist structure pattern; and
- (e) transferring the negative resist structure pattern to the substrate by etching into the substrate through spaces in the negative resist structure pattern.

124. (Withdrawn) A method of forming a patterned material structure on a substrate, comprising:

- (a) providing a substrate comprised of a material selected from the group consisting of semiconductors, ceramics and metals;
- (b) applying a layer of the photoresist composition of claim 106 to the substrate
- (c) patternwise exposing the substrate to radiation whereby acid is generated by the radiation-sensitive acid generator in exposed regions of the photoresist layer thereby inducing crosslinking;
- (d) contacting the substrate with an aqueous alkaline developer solution, whereby the unexposed regions of the photoresist layer are selectively dissolved by the developer solution to reveal a negative resist structure pattern; and





(e) transferring the negative resist structure pattern to the substrate by etching into the substrate through spaces in the negative resist structure pattern.

125. (New) The polymer of claim 81, wherein Q is C<sub>1</sub>-C<sub>4</sub> alkylene.

126. (New) The polymer of claim 84, wherein R<sup>8</sup> is trifluoromethyl.

127. (New) The polymer of claim 91, wherein v is 1 and L is selected from: linear, branched, and cyclic alkylene; linear, branched, and cyclic fluoroalkylene; and arylene.

128. (New) The polymer of claim 100, wherein the acid-cleavable ester has the formula -(L)<sub>v</sub>-(CO)-OR<sup>14</sup> wherein v is zero or 1, L is a linking group, and R<sup>14</sup> is selected from the group consisting of acyclic tertiary alkyl moieties, cyclic substituents with a tertiary attachment point, and 2-trialkylsilylethyl moieties.

129. (New) The polymer of claim 128, wherein v is 1 and L is selected from: linear, branched, and cyclic alkylene; linear, branched, and cyclic fluoroalkylene; and arylene.

130. (New) The polymer of claim 129, wherein L is selected from linear, branched, and cyclic alkylene.

131. (New) The polymer of 130, wherein L is cyclic alkylene.

132. (New) The polymer of claim 131, wherein L is a norbornyl or cyclohexyl group.

133. (New) The polymer of claim 132, wherein L is norbornyl.

134. (New) The polymer of claim 131, wherein R<sup>14</sup> is acyclic tertiary alkyl.

135. (New) The polymer of claim 132, wherein R<sup>14</sup> is acyclic tertiary alkyl.

136. (New) The polymer of claim 133, wherein R<sup>14</sup> is acyclic tertiary alkyl.

137. (New) The polymer of claim 134, wherein R<sup>14</sup> is *t*-butyl.

138. (New) The polymer of claim 135, wherein R<sup>14</sup> is *t*-butyl.

139. (New) The polymer of claim 136, wherein R<sup>14</sup> is *t*-butyl.

140. (New) The polymer of claim 131 wherein R<sup>14</sup> is a cyclic substituent with a tertiary attachment point.

141. (New) The polymer of claim 132, wherein R<sup>14</sup> is a cyclic substituent with a tertiary attachment point.

142. (New) The polymer of claim 133, wherein R<sup>14</sup> is a cyclic substituent with a tertiary attachment point.

143. (New) The polymer of claim 140, wherein R<sup>14</sup> is selected from the group consisting of adamantyl, norbornyl, isobornyl, 2-methyl-2-adamantyl, 2-methyl-2-isobornyl, 2-butyl-2-adamantyl, 2-propyl-2-isobornyl, 2-methyl-2-tetracyclododecenyl, 2-methyl-2-dihydrodicyclopentadienyl-cyclohexyl, 1-methylcyclopentyl, and 1-methylcyclohexyl.

144. (New) The polymer of claim 141, wherein R<sup>14</sup> is selected from the group consisting of adamantyl, norbornyl, isobornyl, 2-methyl-2-adamantyl, 2-methyl-2-isobornyl, 2-butyl-2-adamantyl, 2-propyl-2-isobornyl, 2-methyl-2-tetracyclododecenyl, 2-methyl-2-dihydrodicyclopentadienyl-cyclohexyl, 1-methylcyclopentyl, and 1-methylcyclohexyl.

145. (New) The polymer of claim 144, wherein R<sup>14</sup> is selected from the group consisting of adamantyl, norbornyl, isobornyl, 2-methyl-2-adamantyl, 2-methyl-2-isobornyl, 2-butyl-2-adamantyl, 2-propyl-2-isobornyl, 2-methyl-2-tetracyclododecenyl, 2-methyl-2-dihydrodicyclopentadienyl-cyclohexyl, 1-methylcyclopentyl, and 1-methylcyclohexyl.

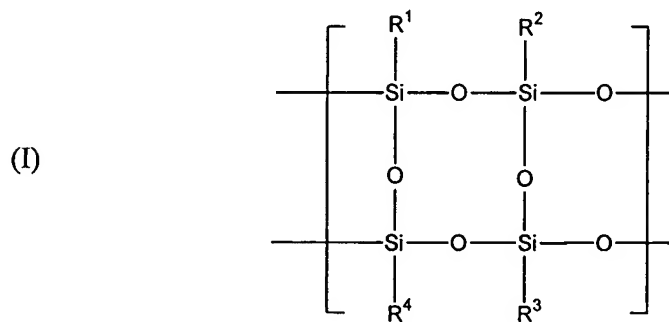
146. (New) The polymer of claim 131, wherein R<sup>14</sup> is 2-trialkylsilylethyl.

147. (New) The polymer of claim 132, wherein R<sup>14</sup> is 2-trialkylsilylethyl.

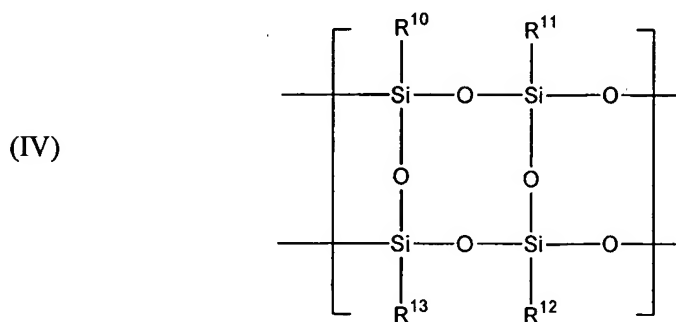
148. (New) The polymer of claim 133, wherein R<sup>14</sup> is 2-trialkylsilylethyl.



149. (New) The polymer of claim 131, wherein  $R^{14}$  is 2-trialkylsilylethyl.
150. (New) The polymer of claim 147, wherein  $R^{14}$  is 2-trimethylsilylethyl.
151. (New) The polymer of claim 148, wherein  $R^{14}$  is 2-trimethylsilylethyl.
152. (New) The polymer of claim 151, wherein  $R^{14}$  is 2-trimethylsilylethyl.
153. (New) A copolymer comprised of fluorinated silsesquioxane monomer units having the structure (I)



and silsesquioxane comonomer units having the structure (IV)



wherein:

- $R^1, R^2, R^3$  and  $R^4$  are independently selected from substituents of the formula  $-Q-CH(R^8)R^9$ ;
- $Q$  is  $C_1-C_4$  alkylene;
- $R^8$  is  $C_1-C_6$  fluoroalkyl;
- $R^9$  is OH or COOH;

$R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  are independently selected from the group consisting of hydrogen, alkyl, and acid-cleavable esters of the formula  $-L-(CO)-OR^{14}$ , with the proviso that at least one of  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R^{13}$  is an acid-cleavable ester of the formula  $-L-(CO)-OR^{14}$ ;

L is a cycloalkylene linking group; and

$R^{14}$  is selected from the group consisting of acyclic tertiary alkyl moieties, cyclic substituents with a tertiary attachment point, and 2-trialkylsilylethyl moieties.

154. (New) The copolymer of claim 153, wherein:

$R^8$  is selected from trifluoromethyl and trifluoromethyl-substituted  $C_1-C_6$  alkyl; and

$R^9$  is OH.

155. (New) The copolymer of claim 154, wherein:

$R^8$  is trifluoromethyl;

$R^{14}$  is selected from the group consisting of *t*-butyl, adamantyl, norbornyl, isobornyl, 2-methyl-2-adamantyl, 2-methyl-2-isobornyl, 2-butyl-2-adamantyl, 2-propyl-2-isobornyl, 2-methyl-2-tetracyclododecenyl, 2-methyl-2-dihydrodicyclopentadienyl-cyclohexyl, 1-methylcyclopentyl, 1-methylcyclohexyl, 2-trimethylsilylethyl, and 2-triethylsilylethyl.

156. (New) The copolymer of claim 155, wherein:

L is norbornyl; and

$R^{14}$  is *t*-butyl.

157. (New) A lithographic photoresist composition comprising the copolymer of claim 153 and a radiation-sensitive acid generator.

158. (New) The lithographic photoresist composition of claim 157, wherein the photoresist composition is a positive resist and further comprises a photoacid-cleavable dissolution inhibitor.

159. (New) The lithographic photoresist composition of claim 157, wherein the photoresist composition is a negative resist and further comprises a crosslinking agent.



## **REMARKS**

### **A. The Amendments:**

The amendment to the title focuses on the subject matter of the elected claim group, i.e., on fluorinated silsesquioxane polymers (including copolymers) and photoresists containing the polymers. See Section B for applicants' election.

In the claims, claims 67, 71, 73, 85, 91, 92, 94, and 95 have been amended, claims 1-66, 68-70, 72, 74, 77, 78, 82, and 83 have been canceled, and new claims 125 through 159 have been added. Accordingly, claims 67, 71, 73, 75, 79-81, 84-159 are now pending, with claims 111-124 having been withdrawn. All claims, including the amended and new claims are within the elected group, except for withdrawn claims 111-124.

The amendments to claims 67, 71, 73, 85, 91, 92, 94, and 95 are as follows:

Claim 67 has been amended to specify  $R^7$  as hydrogen and to incorporate the optional linker Q (from previously pending claim 68), wherein Q is arylene, substituted arylene, alkarylene, substituted alkarylene, or  $C_1$ - $C_4$  alkylene optionally substituted with at least one nonhydrogen substituent selected from alkyl and fluoroalkyl (as previously recited in claim 69). Claim 71, 73, and 85 have been amended in light of the amendments to claim 67.

Claim 91 has been amended for clarification, since "alicyclic" groups and linkers are encompassed by the more generic term "cyclic," as is made clear in the specification (see, e.g., lines 6 and 7 of paragraph [0045]). Claims 92 and 94 have been amended in light of the amendment to claim 91.

Claim 95 has been amended to correct a minor and inadvertent error, and claim 99 has been amended solely for clarification.

The new claims are supported as follows:

Claims 125-127 are claims of intermediate scope further defining the subject matter of parent claims 81, 84, and 91, respectively, and supported in the specification at paragraphs [0019] and [0041]-[0044].

Claims 128 and 129 are analogous to claims 91 and 127, but depend from copolymer claim 100.

Claims 130-133 are directed to alkylene, cyclic alkylene, norbornyl or cyclohexyl, or norbornyl linking moieties "L," respectively, as set forth in paragraph [0045].

Claims 134-152 are directed to  $R^{14}$ , and are supported in, for example, paragraph [0045].

Claim 153 is directed to a copolymer which is a subset of the copolymer recited in claim 98; claims 154-156 further refine the definitions of the various components, as recited in the specification and earlier claims.

Claims 157-159 are analogous to previously presented claims 102, 104, and 106, but depend from new copolymer claim 153.

Accordingly, no new matter has been added, and entry of the amendments and new claims is therefore proper.

**B. The Requirement for Restriction:**

Group (I), Claims 67-110, drawn to a fluorinated silsesquioxane polymer, a fluorinated silsesquioxane copolymer, and a photoresist composition thereof;

Group (II), Claims 111-118, drawn to a process for using the polymer and copolymer in generating a resist image on a substrate; and;

Group (III), Claims 119-124, drawn to a process for using the polymer and copolymer in forming a patterned material structure on a substrate.

Applicants elect Group (I) without traverse. Note that nonelected claims 111-118 have been canceled.

If the Examiner has any questions concerning this communication, or would like to discuss the application, the art, or other pertinent matters as search and examination are initiated, she is invited to contact the undersigned attorney at (650) 330-0900.

Respectfully submitted,

By:



Dianne E. Reed  
Registration No. 31,292

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:

Ratnam SOORIYAKUMARAN et al. Confirmation No.: 7983

Serial No.: 10/079,289

Group Art Unit: 1752

Filing Date: February 19, 2002

Examiner: Yvette C. Thornton

Title: SUBSTANTIALLY TRANSPARENT AQUEOUS BASE SOLUBLE POLYMER  
SYSTEM FOR USE IN 157 NM RESIST APPLICATIONS

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is a duplicate of the Supplemental Information Disclosure Statement submitted October 23, 2003 for the Examiner's consideration. Applicants respectfully request that the Examiner review and make of record the references identified below.


A PTO-1449 form listing the references accompanies this paper. Applicants would appreciate the Examiner's initialing and returning the form to indicate that the references have been reviewed and made of record. The references are as follows:

| U.S. PATENT DOCUMENTS |                                |                               |
|-----------------------|--------------------------------|-------------------------------|
| Document No.          | Issue Date or Publication Date | Name of Patentee or Applicant |
| 6,531,260             | 3/11/03                        | Iwasawa et al.                |
| 6,623,909             | 9/23/03                        | Hatakeyama et al.             |

This Information Disclosure Statement is not intended as a representation that additional information material to the examination of this application does not exist, or that any of the above references constitutes prior art to the present application within the meaning of 35 USC § 102.

As applicants have not yet received a first Action on the merits, no fee is required for filing this Information Disclosure Statement. If, however, the PTO finds that for some reason a fee is found to be necessary, Deposit Account No. 09-0441 may be charged therefore.

Respectfully submitted,

By:   
Dianne E. Reed  
Registration No. 31,292

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Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

*Complete if Known*

|                        |                        |
|------------------------|------------------------|
| Application Number     | 10/079,289             |
| Filing Date            | February 19, 2002      |
| First Named Inventor   | SOORIYAKURMARAN et al. |
| Art Unit               | 1652                   |
| Examiner Name          | Unassigned             |
| Attorney Docket Number | YOR920000693US2        |

|       |   |    |   |
|-------|---|----|---|
| Sheet | 1 | of | 1 |
|-------|---|----|---|

## U.S. PATENT DOCUMENTS

| Examiner<br>Initials* | Cite<br>No. | Document No. | Issue Date or<br>Publication Date | Name of Patentee or<br>Applicant of Cited Document | Class | Subclass | Filing Date<br>if Appropriate |
|-----------------------|-------------|--------------|-----------------------------------|--|-------|----------|-------------------------------|
|                       | BR          | 6,531,260    | 3/11/03                           | Iwasawa et al.                                     |       |          | 4/3/01                        |
|                       | BS          | 6,623,909    | 9/23/03                           | Hatakeyama et al.                                  |       |          | 6/1/01                        |

|                       |  |                    |  |
|-----------------------|--|--------------------|--|
| Examiner<br>Signature |  | Date<br>Considered |  |
|-----------------------|--|--------------------|--|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**COPY**

|   |                        |                       |
|---|------------------------|-----------------------|
| <b>TRANSMITTAL FORM</b><br><br>(to be used for all correspondence after initial filing) | Application Number     | 10/079,289            |
|   | Filing Date            | February 19, 2002     |
|   | First Named Inventor   | Ratnam Sooriyakumaran |
|   | Art Unit               | 1752                  |
|   | Examiner Name          | Yvette C. Thornton    |
|   | Attorney Docket Number | YOR920000693US2       |
| Mail Stop   |                        |                       |

| ENCLOSURES (Check all that apply)   |  |  |
|---|--|--|
| <input type="checkbox"/> No fee due<br><input type="checkbox"/> Fee Transmittal<br><input checked="" type="checkbox"/> Fee(s) due<br><input checked="" type="checkbox"/> Fee Transmittal<br><input type="checkbox"/> Check for \$*<br><input checked="" type="checkbox"/> Charge any underpayment or credit any overpayment to Deposit Account No. 18-0580<br><input checked="" type="checkbox"/> Return postcard<br><input checked="" type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input checked="" type="checkbox"/> Information Disclosure Statement & Form(s) PTO-1449<br><input type="checkbox"/> Copy(ies) of cited reference(s)<br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Response to Missing Parts / Incomplete Application<br><input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s): | <input type="checkbox"/> After Allowance Communication to a Technology Center (TC)<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input type="checkbox"/> Other Enclosure(s) (please identify below): |
| Remarks:<br><b>The Commissioner is hereby authorized to charge any additional or underpayment of fee(s) to Deposit Account No. 18-0580.</b>   |  |  |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT |  |           |                   |
|--|--|-----------|-------------------|
| Firm or Individual Name (print/type)       | Dianne E. Reed, Reg. No. 31,292<br>Reed & Eberle LLP | Telephone | (650) 330-0900    |
| Signature                                  | <i>Dianne E. Reed</i>                                | Date      | December 19, 2003 |

| CERTIFICATE OF MAILING  |                      |      |                   |
|---|----------------------|------|-------------------|
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below. |                      |      |                   |
| Name (print/type)   | Mary O'Malley        | Date | December 19, 2003 |
| Signature   | <i>Mary O'Malley</i> | Date | December 19, 2003 |



Atty Dkt No. YOR920000693US2  
PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:

Ratnam SOORIYAKUMARAN et al.

Confirmation No.: 7983

Serial No.: 10/079,289

Group Art Unit: 1752

Filing Date: February 19, 2002

Examiner: Yvette C. THORNTON

Title: FLUORINATED SILSESQUIOXANE POLYMERS AND USE THEREOF IN  
LITHOGRAPHIC PHOTORESIST COMPOSITIONS

**STATEMENT OF MARY O'MALLEY IN SUPPORT OF THE PETITION  
TO WITHDRAW THE HOLDING OF ABANDONMENT**

Mail Stop Petitions  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I, Mary O'Malley, state the following:

1. I am a patent administrator for the law firm of Reed & Eberle LLP (formerly Reed & Associates) and have been acting in my capacity as such since August, 2002.
2. On December 19, 2003, I received the following documents for submission to the United States Patent and Trademark Office for the patent application identified above:
  - i. a Third Preliminary Amendment and Response to Requirement for Restriction; and
  - ii. an Information Disclosure Statement;
3. I prepared the Transmittal Form, Fee Transmittal, and a return postcard and gave the documents to attorney Dianne E. Reed for review and signature. After the signed documents were returned to me, I signed the certificate of mailing on the Transmittal Form, made copies of the documents, and placed the originals in an envelope addressed to the United States Patent and Trademark Office. I then placed the correct postage on the envelope, and placed the envelope in the outgoing mail basket for our law firm. The mail was picked up and hand-delivered to the nearest United States Postal Service office at 5:00 p.m.

4. Based on the foregoing sequence of events, I state that the Transmittal Form, Fee Transmittal, Response to the Notice of Non-Compliant Amendment, Information Disclosure Statement and return postcard for this patent application were timely filed on December 19, 2003.

Date: August 16, 2004

Name: Mary O'Malley  
Mary O'Malley

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Atty Dkt No.: 5075-0029.20  
YOR920000693US2 Mailing Date: December 19, 2003  
Inventor(s): Ratnam Sooriyakumaran et al.  
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Response to Non-Compliant Amendment  
Information Disclosure Statement; PTO-1449  
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